By the Lagrange Inversion Theorem [4], w has the expansion

$$w = \sum_{m \quad 1} \frac{\quad^{m}}{m!} \sum_{l \quad 0} (\quad 1)^{l} \begin{bmatrix} l+m \\ l+1 \end{bmatrix} \quad^{l} : \qquad (2d)$$

One converts from and back to L_1 and L_2 to complete the theorem.

Since the domain of convergence of (2a) is described only as `$xxxxxxx$

the theorem follows.

4. Expansions using new variables. | Two further series developments can be obtained by introducing the variables L = ln(1) and = =(1).

Theorem 4. | *With the preceding notation, W has the series development*

$$W(x) = L_1 \quad L_2 \quad L \quad \sum_{n \quad 1} (\quad)^n \sum_{m=1}^{n} (\quad 1)^{m+1} \begin{bmatrix} n \\ n \quad m+1 \end{bmatrix} \frac{L^m}{m!} : \qquad (4a)$$

Proof. | We set $w = v \quad L$ in (2*c*